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| 09/381,631 | 03/01/2000 | PIERRE JEANVOINE | 1247-0822-0V | 4206 |

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EXAMINER

VINCENT, SEAN E

ART UNIT PAPER NUMBER

1731

DATE MAILED: 09/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/381,631

Applicant(s)

JEANVOINE ET AL.

Examiner

Sean E. Vincent

Art Unit

1731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 38-116 is/are pending in the application.
- 4a) Of the above claim(s) 41, 47-49, 51-55, 57-76, 79-97, 99 and 107-114 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 38-40, 42-46, 50, 56, 77, 78, 98, 100-106, 115 and 116 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114 was filed in this application after appeal to the Board of Patent Appeals and Interferences, but prior to a decision on the appeal. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on May 27, 2004 has been entered.

Election/Restrictions

2. Claims 41, 47-49, 51-55, 57-76, 79-97, 99 and 107-114 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to nonelected inventions, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on November 4, 2002.
3. Applicant's election with traverse of claims 38-40, 42-46, 50, 56, 77, 78, 98 and 100-106 in the reply filed on November 4, 2002 is acknowledged. The traversal was not found persuasive for reasons set forth in the final rejection mailed January 9, 2003.

The requirement is still deemed proper and is therefore made FINAL.

Information Disclosure Statement

4. The information disclosure statements (IDS) submitted on June 7, 2004 and on May 27, 2004 are being considered by the examiner.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 38, 39, 42-45, 50, 56, 98, 100, 106 and 115 are rejected under 35 U.S.C. 102(b) as being anticipated by Floyd et al (US 5615626). Features of applicant's claims can be found in the abstract, figures, col. 2, line 26 to col. 4, line 10; col. 5, line 34 to col. 6, line 60; col. 7, lines 39-48; col. 8, lines 6-38; col. 10, lines 20-35 and the example. Specifically, oxides, incinerator ash, slag, swarf and mineral feed streams as well as coal were disclosed at col. 3, lines 32-61; col. 4, lines 3-6; col. 6, lines 3-10, 18-24, 55-56; col. 12, lines 16-23 (note "smelting") and 40-42; and col. 13, lines 1-16. Submerged combustion with an oxygen or free-oxygen containing gas lance mounted adjustably in the roof of the reactor is shown in col. 3, lines 1-3; col. 5, lines 1-7 and 34-68. The recitation of "municipal waste" in Floyd et al is considered to include various "glazings".

7. Floyd et al produced materials used in landfills or as building materials that were known to contain glassy phases (see Floyd et al, col. 6, lines 50-60). Furthermore, the example of Floyd et al demonstrates that a feed stream containing mostly oxides in the form of steel swarf and incinerator ash was heated to 1230°C. Note also that the total oxide proportion of the waste feed (col. 13, lines 5-16) was 74%. The oxides in the waste feed stream were well known in the art to be glass formers (see also, col. 4, lines 3-6). These facts, as well as the numerous references to

Art Unit: 1731

slag and flux, clearly indicate a glass melting process. The Merriam-Webster's Collegiate Dictionary 10th ed. Defines "glass" as "any of various amorphous materials formed from a melt by cooling to rigidity without crystallization." It should also be noted that the applicant does not claim or disclose a proportion of glass in the feed stream or product of the invention.

8. With regard to claim 43, the figures of Floyd et al illustrated a roof-mounted burner (lance). With regard to claim 44, Floyd et al disclosed convective stirring in col. 3, lines 1-3; col. 5, lines 34-38 and 51-55; and col. 10, lines 20-35. With regard to claim 45, col. 6, lines 44-48 and col. 9, lines 12-19 of Floyd et al and also col. 3, lines 22-32 of Floyd et al disclosed the roof-mounted lance was to be raised and lowered and the level of molten slag was disclosed to be controlled in batch, continuous and semi-continuous melting campaigns. With regard to claim 50, the disclosed melting range in Floyd et al was 1100 to 1400°C (col. 3, line 36). With regard to claim 56, Floyd et al: col. 3, lines 30-33; col. 10, lines 27-29 and figure 1 disclose that vitrifiable materials are introduced below the surface of the molten bath. With regard to claims 98 and 100, Floyd et al, col. 6, lines 56-60 and col. 13, lines 17-22 disclosed that slag was granulated to provide building materials.

9. With regard to claim 106, the claim is substantially identical to claim 38 except for the "manufacturing an electronic part" in the preamble. A preamble that recites the use or purpose of the claimed invention generally does not limit the claims *Catalina Marketing International Inc. v. Coolsavings.com, Inc.*, 62 USPQ2d 1781 at 1785 (Fed. Cir. 2002). While the claim concludes with the phrase "during said manufacturing.", no electronic part manufacturing steps are actually claimed. The method steps end at melting.

10. With regard to claim 115, the applicant has admitted on page 6, lines 11-14 of the appeal brief filed July 9, 2003 that Floyd et al: figure 1 showed a "very porous" treated mass. It is also noted that claim 115 merely melted vitrifiable material into a foamy glass. The claim does not solidify the molten foamy glass.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

13. Claims 40, 46, 78, 101-104 and 116 are rejected under 35 U.S.C. 103(a) as being unpatentable over Floyd et al. With regard to claims 40 and 78, Floyd et al does not specify composite materials containing glass and metal. Col. 2, lines 31-64 of Floyd et al lists many waste products that can be charged into the submerged combustion melter, including motor vehicle tires and vehicle battery casings. It is the position of the examiner that tires and battery

casings are known to contain metallic belts and metallic electrodes respectively. Considering that all of the waste was charged into a molten slag at glass or slag melting temperatures, it would not have mattered whether the metallics were attached to glass parts or organic parts. The metal would have oxidized rapidly no matter to what it was attached.

14. With regard to claim 46, Floyd et al did not disclose a pre-heating step, per se. The examiner notes that a significant proportion of the feed stream of Floyd et al was incinerator ash or steel swarf (see example) and in some cases, recycled slag (see col. 6, lines 53-56). An immediately preceding incineration or steel refining process would have provided pre heated vitrifiable materials. It would have been obvious in the process of Floyd et al to provide the pre heated materials at 900°C or lower since the incineration of organic matter would likely have taken place well below 900°C and the incinerator ash would have to be rushed from the incineration to the melting stage to prevent it from cooling excessively.

15. With regard to claims 101, 103 and 104, Floyd et al did not teach the manufacture of flat glass, bottles, flasks, glass wool or glass fiber. It is the position of the examiner that once the vitrifiable materials of Floyd et al are in a molten form, any forming process could have been performed on the molten materials. Further, no specific method steps for forming such products are claimed only a general "manufacturing". The intended use of the molten glass does not result in a manipulative difference as compared to the combined teachings of Floyd et al to make molten glass.

16. With regard to claim 102, Floyd et al did not teach a flat product with a solar-protection or fire-resistance function. It is the position of the examiner that future use or properties of the product do not change the manipulative steps of the process of the invention. Furthermore, it

Art Unit: 1731

would have been obvious to produce a product with a residual blue color in light of the description of the waste feed disclosed by Floyd et al. Note that iron and manganese in small amounts were known in the art to impart a blue color to glass (see Floyd et al, col. 2, lines 32-40).

17. With regard to claim 116, Floyd et al did not disclose a specific density. It would have been obvious to a person skilled in the art at the time the invention was made to melt a foamy glass having a density of 0.5 to 2 g/cm³ because the specific process conditions recited are not critical but are merely optimal for the particular material being treated and they would be within the skill of the art to determine, *In re Aller et al.*, 105 U.S.P.Q. 233, 42 C.C.P.A. 824. It is the position of the Examiner that it would not require undue experimentation by a person of ordinary skill in the art at the time the invention was made to find these conditions beneficial.

18. Claims 77 and 105 are rejected under 35 U.S.C. 103(a) as being unpatentable over Floyd et al in view of Greve (US 4983549).

19. Floyd et al did not teach the inclusion of laminated glass or mineral fibers with organic binders in the waste charged into the submerged combustion melter. Greve taught methods of recycling plastic composite materials wherein glass fiber reinforced composites were pyrolyzed and the inorganic pyrolyzate was melted into glass products (see col. 3, lines 33-51, col. 4, lines 4-59, col. 5, lines 3-16, col. 6, line 1 to col. 8, line 49 and col. 10, line 41 to col. 11, line 59). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the composites of Greve in the waste charged into the melter of Floyd et al because Floyd et al taught that the organics would combust and leave behind meltable inorganics. Alternatively, it would have been obvious to a person of ordinary skill in the art at

Art Unit: 1731

the time the invention was made to use the inorganic pyrolyzate of Greve in the ash inclusion of Floyd et al because Greve taught that the pyrolyzate would have melted readily into E glass.

Response to Arguments

20. Applicant's arguments with respect to claims 38-40, 42-46, 50, 56, 77, 78, 98, 100-106, 115 and 116 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sean E. Vincent whose telephone number is (571) 272-1194. The examiner can normally be reached on M - F (8:30 - 6:00).

22. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven P. Griffin can be reached on (571) 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

23. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sean E Vincent
Primary Examiner
Art Unit 1731

S Vincent